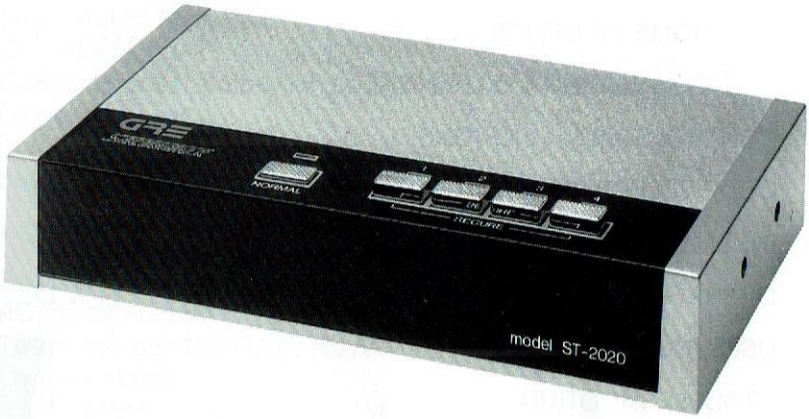
GRE AMERICA, INC.



SecureTalk™
Model ST-2020

OWNER'S MANUAL

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PREPARATION

1. Unpacking and Parts Check

Carefully remove all items from the shipping carton.
If there is any visible damage or missing parts, DO NOT attempt to operate the equipment. Notify your dealer or shipping carrier immediately.
The following parts are included:

For Cellular Use

1 -SecureTalk™ Main Unit
1 -Cigarette Lighter Power Adaptor
2 -Cellular Handset Cords with Appropriate Connector Adaptors
1 -Owner's Manual
1 -Set of Mounting Brackets
1 -Set of Hook and Loop (Velcro) Strips

For Office Use

1 -SecureTalk™ Main Unit
1 -AC Power Adaptor
1 -Telephone Handset Cord with Adaptor
1 -Owner's Manual

GENERAL DESCRIPTION

SecureTalk™ is a voice encryption device designed to block all casual eavesdropping on conversations between cellular telephones and any other corded or cellular telephone equipped with SecureTalk™.

SecureTalk™ provides a choice of 32 different scrambling codes over 4 channels. When an unscrambled conversation is desired, disconnection of the unit is not necessary, simply pressing the normal mode button will make this conversation possible.

Small, lightweight, and portable, the SecureTalk™ can also protect inter-office communications over regular corded telephones. Once the scrambling mode has been entered, the ensuing conversation is completely isolated from casual unwanted outside interception.

FEATURES

- 4 Secure Mode Buttons and 1 Normal Mode Button
- Easy to see LED Channel and Mode Indicator
- 32 Internally Selectable Codes
- Adjustable Volume for both Speaking and Listening
- Modular Connector/Adaptor
- AC/DC Power Jack

TECHNICAL SPECIFICATIONS

CODING:	4 externally selectable codes 32 internally selectable codes
CODING TECHNIQUE:	2 band frequency inversion
OPERATING CONDITIONS:	–25°C to +65°C
STORAGE:	–30°C to +80°C
HUMIDITY:	Up to 90% non-condensing
POWER REQUIREMENTS:	9 to 14V DC
POWER CONSUMPTION:	100mA in Secure Mode 10mA in Normal Mode
W x H x D :	7 x 14 x 4 (inches) 177 x 35 x 100 (mm)
WEIGHT:	380g (0.84 lbs)

DESCRIPTION OF INTERFACE CONNECTIONS

The SecureTalk™ requires proper interface connectors which are compatible with your telephone equipment. GRE America Inc. provides necessary connectors and adaptors to support your requirements.

The following tables list selections of telephone equipment and recommended adaptors.

Home or Office Telephone

Telephone manufacturer	Connector Adaptor Part Number	
	to handset	to mainunit
PANASONIC	2020201A	2020201B
SONY	2020202A	2020202B
RADIO SHACK	2020203A	2020203B
AT&T (MERLIN)	2020204A	2020204B

NOTE: THIS LIST WILL BE UPDATED PERIODICALLY WITH THE INTRODUCTION OF NEW DIFFERENT MODELS OF PHONES. CONTACT YOUR DEALER FOR MORE INFORMATION.

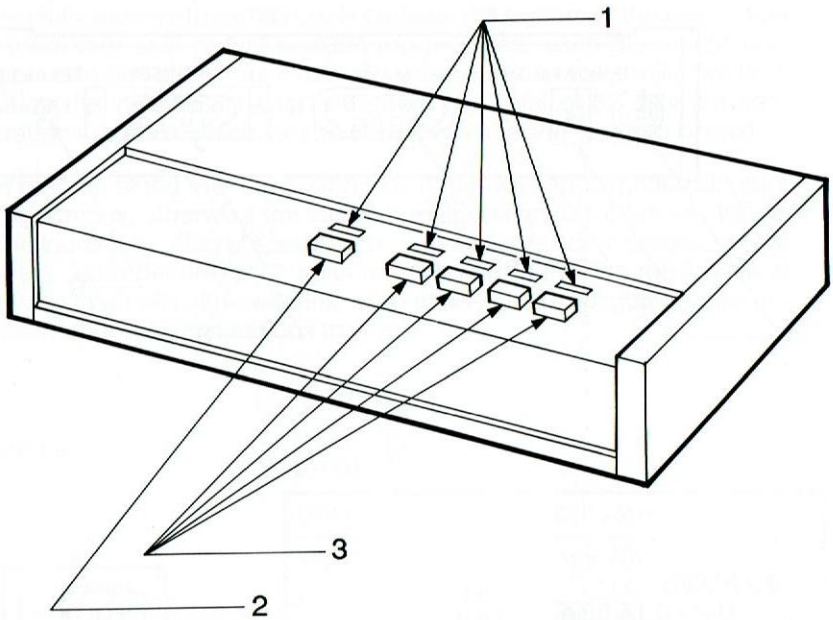
Cellular Telephone

Cellular manufacturer	Connector Adaptor Part Number	
	to handset	to mainunit
MOTOROLA		
2000,3000,4000	2020101A	2020101B
NEC		
M4500,9000	2020102A	2020102B
OKI		
201,210,230	2020103A	2020103B
410,450,490	2020110A	2020110B
AUDIOVOX		
400,450	2020104A	2020104B
NOVATEL		
380	2020105A	2020105B
270,290	2020109A	2020109B
MITSUBISHI		
301	2020106A	2020106B
401	2020107A	2020107B
UNIDEN		
CP1000	2020108A	2020108B

NOTE:
AS THERE ARE MANY DIFFERENT CELLULAR PHONES ON THE MARKET AND NEW MODELS BEING CONSTANTLY INTRODUCED, THIS COMPATIBILITY CHART WILL BE UPDATED PERIODICALLY, CONTACT YOUR DEALER FOR MORE INFORMATION.

NOTE:
The SecureTalk™ D-sub 9 pin connector located at the rear panel is designed to support GE(model CF1000,2000) cellular telephones.

CONTROLS AND FUNCTIONS

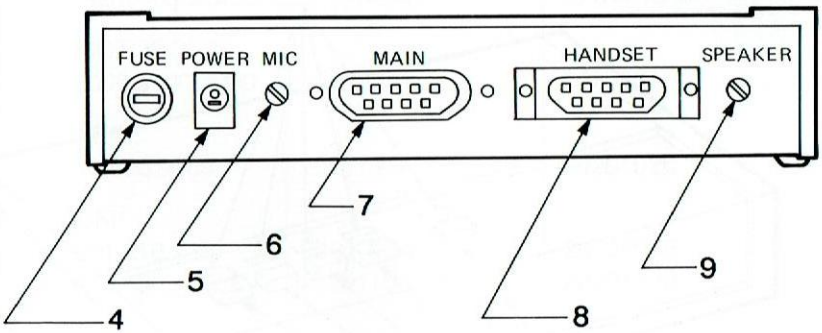


1. LED INDICATOR
Lights when the push-button switch below it has been pressed

2. NORMAL SELECT BUTTON
Activates normal unscrambled communications when pressed

3. SECURE CHANNEL SELECT BUTTONS
Activates the secure modes when pressed

Back Panel of SecureTalk™ Unit



4. FUSE
Uses 0.1A fuse

5. POWER INPUT

6. MIC LEVEL
Sets the mic to the desired level

7. CONNECTOR TO MAIN UNIT
9 pin D-sub connector connecting to the main unit

8. CONNECTOR TO HANDSET
9 pin D-sub connector connecting to the handset

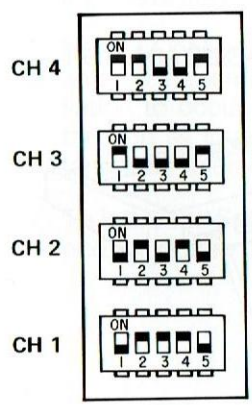
9. SPEAKER LEVEL
Sets the speaker volume to the desired level

CODE SELECTION

To readjust the preset factory codes, use a phillips head-type screw driver to carefully remove the small cover plate on the bottom of the unit. Inside there are four sets of two-position dip switches, each dip switch corresponds to one of the four externally selectable channels. With five two-position dip switches in each set, there is a total of 32 different configurations (codes) which can be chosen(please see diagram below).

NOTE: Each of the four dip switch sets (channels) should have different configurations, otherwise the four externally selectable channels will be coded identically. Also of special note, when secure communications are desired, both SecureTalk™ units at each end of the line must have at least one channel's dip-switches set in an identical configuration for understandable communications to occur.

EXAMPLES



1 = ON
0 = OFF

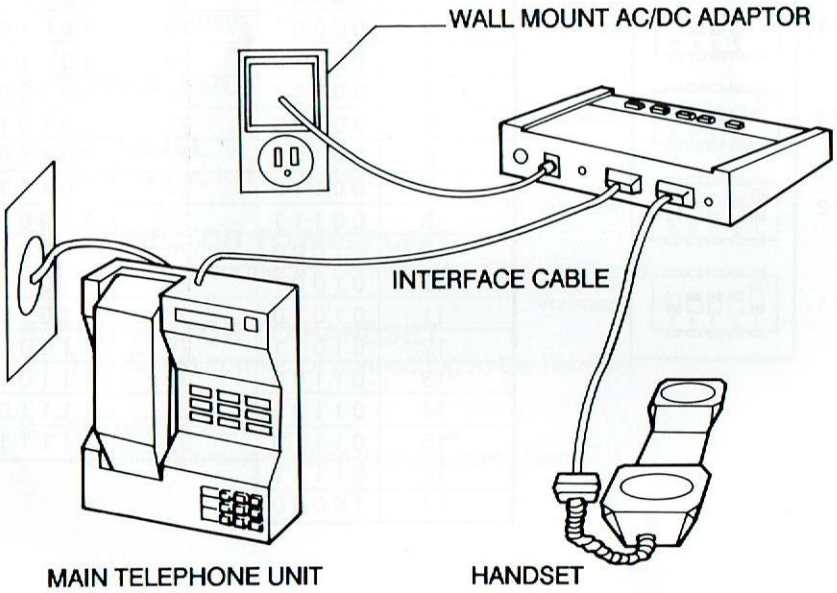
DIP switch code No.	1 2 3 4 5	DIP switch code No.	1 2 3 4 5
1	0 0 0 0 0	*18	1 0 0 0 1
2	0 0 0 0 1	19	1 0 0 1 0
3	0 0 0 1 0	20	1 0 0 1 1
4	0 0 0 1 1	21	1 0 1 0 0
5	0 0 1 0 0	22	1 0 1 0 1
6	0 0 1 0 1	23	1 0 1 1 0
7	0 0 1 1 0	24	1 0 1 1 1
8	0 0 1 1 1	25	1 1 0 0 0
9	0 1 0 0 0	*26	1 1 0 0 1
10	0 1 0 0 1	27	1 1 0 1 0
*11	0 1 0 1 0	28	1 1 0 1 1
12	0 1 0 1 1	29	1 1 1 0 0
13	0 1 1 0 0	30	1 1 1 0 1
14	0 1 1 0 1	31	1 1 1 1 0
*15	0 1 1 1 0	32	1 1 1 1 1
16	0 1 1 1 1		
17	1 0 0 0 0		

INSTALLATION

Installation of SecureTalk™ is very simple. For home or office, simply place the unit on a table near the telephone, disconnect the handset cord from the telephone base unit and connect it to the input connector of SecureTalk™. Then take the cord provided with the SecureTalk™ unit and connect one end to the output connector of the unit and connect the other end to the base unit of the phone.

For use in the car, the connection process is identical except that different adaptors will be necessary depending on the make of cellular phone being used (please see chart). Mounting of SecureTalk™ in the car will vary according to customer preference. GRE provides one set of brackets and two Velcro strips with each unit, however, the customer may wish for something different and other mounting devices are available at your cellular retailer.

The last step before operation is to connect the external power source, using an adaptor to the cigarette lighter in the car for mobile phone connections, or an adaptor to a wall outlet for home or office use. The adaptor should now be connected (see diagram) to the back of SecureTalk™. The unit is now ready for operation.



OPERATION

1. Placing and Receiving Calls

Before operation, it is important to make sure that all connections are tight and the unit is receiving power. Check for lit LED.

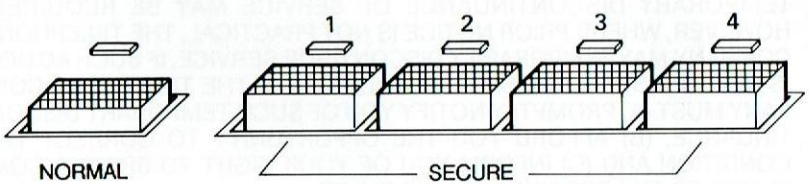
In order to place or receive calls with the SecureTalk™ connected, the unit **must be in the "NORMAL"** mode. In other words, the button marked "NORMAL" on the top of the unit must be depressed. Phone calls cannot be made in the Secure mode. This mode should be entered into **after** connection with the other party has been made. It is good practice, therefore, to always return to the Normal position when ending a call in the Secure mode.

2. Entering and Leaving the Secure Mode

Entering a Secure mode with the SecureTalk™ connected is a very simple process. Once connection with the party on the other end has been made, the Secure mode may be entered into by simply depressing one of the four Secure mode channel buttons on the top of the unit.

NOTE: Once again the party on the other end of the line must have entered the same code(1 of 32) in order for an understandable conversation to occur. As long as the codes for each party are matched through all four channels, both parties can switch channels simultaneously to any other of the four Secure mode channels available.

To leave the Secure mode, simply depress the Normal mode button and make sure that the party on the other end does the same.



USER INSTRUCTIONS

THIS DEVICE HAS BEEN GRANTED A REGISTRATION NUMBER BY THE FEDERAL COMMUNICATIONS COMMISSION(FCC), UNDER PART 68 RULES AND REGULATIONS FOR DIRECT CONNECTIONS TO THE TELEPHONE LINE. IN ORDER TO COMPLY WITH THESE FCC RULES, THE FOLLOWING INSTRUCTIONS MUST BE CAREFULLY READ AND APPLICABLE PORTIONS FOLLOWED COMPLETELY.

1. DIRECT CONNECTION TO THE TELEPHONE LINE MAY BE MADE ONLY THROUGH THE STANDARD PLUG-ENDED CORD FURNISHED WITH THE UNIT.

2. CUSTOMERS CONNECTING TERMINAL EQUIPMENT OR PROTECTIVE CIRCUITRY TO THE TELEPHONE NETWORK, SHALL, UPON REQUEST OF THE TELEPHONE COMPANY, INFORM THE TELEPHONE COMPANY OF THE PARTICULAR LINE(S) TO WHICH SUCH CONNECTION IS MADE. THE FCC REGISTRATION NUMBER, AND RINGER EQUIVALENCE NUMBER OF THE REGISTERED TERMINAL EQUIPMENT'S REGISTERED OR PROTECTIVE CIRCUITRY.

3. REPAIRS MAY BE MADE ONLY BY THE MANUFACTURER OR ITS AUTHORIZED SERVICE AGENCY. UNAUTHORIZED REPAIRS VOID REGISTRATION AND WARRANTY. CONTACT SELLER OR MANUFACTURER FOR DETAILS OF PERMISSIBLE USER PERFORMED ROUTINE REPAIRS, AND WHERE AND HOW TO HAVE OTHER THAN ROUTINE REPAIRS DONE.

4. IF, THROUGH ABNORMAL CIRCUMSTANCES, HARM TO THE TELEPHONE LINES IS CAUSED, IT SHOULD BE UNPLUGGED UNTIL IT CAN BE DETERMINED IF YOUR DEVICE OR THE TELEPHONE LINE IS THE SOURCE. IF YOUR DEVICE IS THE SOURCE, IT SHOULD NOT BE RECONNECTED UNTIL NECESSARY REPAIRS ARE COMPLETED.

5. SHOULD THE TELEPHONE COMPANY NOTIFY YOU THAT YOUR DEVICE IS CAUSING HARM THE DEVICE SHOULD BE UNPLUGGED. THE TELEPHONE COMPANY WILL, WHERE APPLICABLE, NOTIFY YOU, THAT TEMPORARY DISCONTINUANCE OF SERVICE MAY BE REQUIRED. HOWEVER, WHERE PRIOR NOTICE IS NOT PRACTICAL, THE TELEPHONE COMPANY MAY TEMPORARILY DISCONTINUE SERVICE, IF SUCH ACTION IS REASONABLY NECESSARY. IN SUCH CASES THE TELEPHONE COMPANY MUST (A) PROMPTLY NOTIFY YOU OF SUCH TEMPORARY DISCONTINUANCE, (B) AFFORD YOU THE OPPORTUNITY TO CORRECT THE CONDITION AND (C) INFORM YOU OF YOUR RIGHT TO BRING A COMPLAINT TO THE FCC UNDER THEIR RULES.

6. THE TELEPHONE COMPANY MAY MAKE CHANGES IN ITS COMMUNICATIONS FACILITIES EQUIPMENT, OPERATION, OR PROCEDURES, WHERE SUCH ACTION IS REASONABLY REQUIRED IN THE OPERATION OF ITS BUSINESS AND NOT INCONSISTENT WITH FCC RULES. IF SUCH CHANGES CAN BE REASONABLY EXPECTED TO RENDER ANY CUSTOMER'S DEVICES INCOMPATIBLE WITH TELEPHONE COMPANY FACILITIES, OR REQUIRE MODIFICATION OR ALTERATION, OR OTHERWISE MATERIALLY AFFECT ITS PERFORMANCE, WRITTEN NOTIFICATION MUST BE GIVEN TO THE USER, TO ALLOW UNINTERRUPTED SERVICE.

TROUBLESHOOTING

1. Trouble Checklist

1-1. Problem: Telephone or SecureTalk™ does not work properly.

Check:

a) Is the unit plugged in and LED indicator on ?
b) Are phone line and other connectors tightly connected ?
c) Is "NORMAL" mode button depressed when placing the call ?
d) Is the call out of your calling area (for celluar phone use) ?
e) Is there sufficient power coming from the car battery or wall outlet ?

1-2. Problem: When Secure mode is entered, conversation is not under standable.

Check:

a) All items in number 1-1 above.
b) Was the correct channel chosen ?
c) Are internally selectable codes matched with those of the party on the other end ?
d) Is the Secure mode LED lit ?

2. Service

According to FCC regulations this equipment, which has been registered by the FCC, may only be repaired by authorized personnel, otherwise the FCC certification may be voide.

If the entire system has been checked and still fails to operate correctly, carefully pack the unit and ship it prepaid and insured (for your protection) to:

Customer Service Department
GRE America, Inc.
425 Harbor Blvd.
Belmont, CA 94002

NOTE: IF THE FACTORY SEAL ON THE BOTTOM OF THE SecureTalk™ UNIT IS BROKEN OR REMOVED, THE WARRANTY WILL BE INVALIDATED AND WILL NOT BE HONORED BY GRE AMERICA INC.

LIMITED WARRANTY

GRE America, Inc. warrants to the original retail purchaser of this product that this product will be free from defects in materials and workmanship under normal installation, use and service for a period of 180 days from the date of purchase as shown on the purchaser's receipt.

The obligation of GRE America, Inc. under this warranty shall be limited to the replacement or repair (at the discretion of GRE America, Inc.), during the warranty period of any part which proves defective in materials or workmanship under normal installation, use and service.

To obtain replacement or repair within the terms of this warranty, the product should be delivered, TRANSPORTATION PREPAID, to the dealer where the unit was purchased, or to the company at the address shown below.

All returned products must be accompanied by a copy of the receipt showing proof of date of purchase.

This warranty does not apply to any product or part thereof which has been damaged through alteration, mishandling, misuse or accident.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND NO PERSON OR REPRESENTATIVE IS AUTHORIZED TO ASSUME FOR THE COMPANY ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THIS PRODUCT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGE LIABILITY OR A LIMITATION ON HOW LONG AN IMPLIED WARRANTY SHOULD LAST, THEREFORE, THE ABOVE MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

GRE America, Inc.

425 Harbor Blvd., Suite B
Belmont, CA 94002

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-- UPDATE, 7/88 --

CELLULAR COMPATIBILITY CHART

Telephone manufacturer	Connector Adaptor Part Number	
	to handset	to main unit
MOTOROLA 2000, 3000, 4000, AC320	2020101A	2020101B
NEC M4500, 9000	2020102A	2020102B
OKI 201, 210, 230, 410, 450, 490	2020103A	2020103B
NOVATEL 380	2020105A	2020105B
MITSUBISHI 301	2020106A	2020106B
555, 600	2020111A	2020111B
UNIDEN CP1000	2020108A	2020108B
MESA 50, 52, 55	2020111A	2020111B

NOTE:

FOR LAND-LINE USE, THE SECURETALK IS NOT DESIGNED TO WORK WITH TRIM-LINE OR ONE PIECE STYLE TELEPHONES.